Notice of Allowability	Application No.	Applicant(s)	
	09/751,970	TVEIT ET AL.	
	Examiner	Art Unit	
	Ayal I. Sharon	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendment filed 9/14/05*.

2. ☒ The allowed claim(s) is/are *19-23,25-28,32,33,35,36 and 46-57*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *2005/11/29* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other *See Continuation Sheet*.

SPE 2100

Continuation of Attachment(s) 9. Other: Dr. Gatschet's Power of Attorney.

INTRODUCTION

1. Claims 19-23,25-28,32,33,35,36 and 46-57 of U.S. Application 09/751,970 originally filed on 12/29/2000, remain pending in this application.

POWER OF ATTORNEY

2. Applicant's Representative Dr. Mark Gatschet (Reg. No. 42,569) submitted the amendment dated 9/14/2005, but is not listed as an attorney of record for this application in the USPTO's records.
3. Dr. Gatschet faxed his power of attorney for this application to the Examiner on 11/29/2005.
4. The Examiner is entering the power of attorney document into the record.

EXAMINER'S AMENDMENT

5. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
6. Authorization for this Examiner's Amendment was given in a telephone interview with Applicant's Representative Dr. Mark Gatschet (Reg. No. 42,569) on 11/29/2005. (See the attached Interview Summary for details.)
7. All pending claims after entry of the Examiner's Amendment are as follows:

1 - 18. (canceled)

19. (currently amended) An [~~A power system~~] information system for an electrical power generation, transmission and distribution system to provide maintenance for [~~an~~] the electrical power generation, transmission and distribution system and apparatus connected to said [~~power system~~] electrical power generation, transmission and distribution system, said information system comprising one or more databases, said information system comprising:

a service Help Desk,

mobile inspection means to make a graphic image for an inspection report,

communication means at the Help Desk to receive an inspection report comprising a graphic image,

display means at the Help desk to examine at least one of the report and the graphic image,

mobile terminal, computer and display means to retrieve information from the one or more databases,

computer and display means to compare at least one of the graphic image and the inspection report with retrieved information, and

ordering and scheduling means to issue purchase orders and work orders in respect of the [~~plan~~] report in order to provide maintenance service at a later time for the electrical power generation, transmission and distribution system and apparatus connected to said [~~power system~~] electrical power generation, transmission and distribution system.

20. (currently amended) An [~~A power system~~] information system for an electrical power generation, transmission and distribution system according to Claim 19, in which the inspection means comprises a web camera arranged to send pictures in a format suitable for transmission over a network such as the Internet.

21. (currently amended) An [~~A power system~~] information system for an electrical power generation, transmission and distribution system according to Claim 19, which comprises a communication means enabling two-way voice communication between an inspector at a site and the Help Desk.

22. (currently amended) An [~~A power system~~] information system for an electrical power generation, transmission and distribution system according to Claim 19, which comprises storage means to document details of a decision to provide maintenance service.

23. (currently amended) An [~~A power system~~] information system for an electrical power generation, transmission and distribution system according to Claim 19, which comprises reporting and storage means to document details of a plan to provide maintenance service at a later time.

24. (canceled)

25. (currently amended) An [~~A power system~~] information system for an electrical power generation, transmission and distribution system according to Claim 19, which comprises software means to match an identified apparatus to details of the apparatus stored as files in a database of the system, the files comprising any of text, graphic, interactive multimedia, or a sound recording.

26. (currently amended) An [~~A power system~~] information system for an electrical power generation, transmission and distribution system according to Claim 19, which comprises software means to log-on a registered or identified representative of the Utility to examine operations of [~~the power system information~~] a database of the information system.

27. (currently amended) An [~~A power system~~] information system for an electrical power generation, transmission and distribution system according to Claim 19, which comprises software means to log-on a registered or identified representative of the Utility to examine operations of the engineering Help Desk in real time.

28. (currently amended) An [~~A power system~~] information system for an electrical power generation, transmission and distribution system according to Claim 19, which comprises computer program and/or software means to model and or simulate an effect on the [~~power system~~] electrical power generation, transmission and distribution system of any of the following: a disconnection; a partial disconnection; a reconfiguring or

switching in of one part and switching out of another part; an increased load on an equipment; a reduced load on an equipment.

29 - 31. (canceled)

32. (currently amended) A computer-readable medium having computer-executable instructions [~~program product comprising computer code means or software code portions~~] to make a computer or a processor operate in Information System comprising one or more databases and a Help Desk to provide maintenance for an electrical power generation, transmission and distribution system and apparatus connected to said [~~power system~~] electrical power generation, transmission and distribution system, wherein said computer or processor is made to carry out actions to provide maintenance for said [~~power system~~] electrical power generation, transmission and distribution system including to:

receive a data input with a graphic image of a condition of an inspected portion of the electrical power generation, transmission and distribution system and apparatus connected to said [~~power system~~] electrical power generation, transmission and distribution system representing at least one maintenance report,

match the data input to an apparatus connected to a [~~Power System~~] network for said electrical power generation, transmission and distribution system with information stored in a database,

receive a second input documenting a maintenance repair action on the inspected portion,

link the second documented repair action to the apparatus and network,

store the documented repair action.

33. (currently amended) A computer-readable medium [~~program product~~] according to Claim 32, which comprises software means for carrying out a further action to:

update status reports for the apparatus and network.

34. (canceled)

35. (currently amended) A computer-readable medium [~~program product~~] according to Claim 32, which comprises software means for carrying out a further action to:

send a signal comprising details for work orders dependent on the documented repair action to a maintenance Service Provider company.

36. (currently amended) A computer-readable medium [~~program product~~] according to Claim 32, which comprises computer code means or software code portions including executable parts formed or written as one or more object oriented programs and accessible and implementable over a network.

37 - 45. (canceled)

46. (previously presented) A method to provide maintenance to at least one of an electrical power generation facility and an electrical power transmission and distribution network, said method comprising the steps of:

generating an electronic report comprising at least one graphic image of a condition of an inspected portion of at least one of the electrical power generation facility and the electrical power transmission and distribution network;

receiving, at an information system, the electronic report;

presenting, to a user, stored information about the inspected portion;

generating a recommendation for a maintenance measure of the inspected portion;

receiving, at the information system, the recommendation for a maintenance measure of the inspected portion; and

forwarding the recommendation to at least one of an inspector and a parts warehouse.

47. (previously presented) The method according to Claim 46, wherein the step of forwarding comprises the step of forwarding repair instructions to the inspector.

48. (previously presented) The method according to Claim 46, wherein the step of forwarding comprises the step of forwarding a part order to the parts warehouse.

49. (previously presented) The method according to Claim 46, further comprising the step of storing the recommendation at the information system.

50. (previously presented) The method according to Claim 46, wherein at least one of the electronic report and recommendation are transmitted over the Internet.

51. (previously presented) The method according to Claim 46, further comprising the step of accessing the information system via a wireless device.

52. (previously presented) The method according to Claim 46, comprising the further step of inputting technical details of the inspection portion into one or more computer programs for at least one of modeling and simulating the inspected portion according to the recommendation.

53. (previously presented) The method according to Claim 46, further comprising the step of receiving a notice of a condition of a portion of at least one of the electrical power generation facility and the electrical power transmission and distribution network.

54. (previously presented) The method according to Claim 46, further comprising the step of accessing the information system via a web interface.

55. (previously presented) The method according to Claim 54, wherein the step of accessing comprises the step of accessing a database of the information system, wherein the database comprises at least one of information about electrical power generation facility and the electrical power transmission and distribution network and a parts listing for portions of the electrical power generation facility and the electrical power transmission and distribution network.

56. (previously presented) The method according to Claim 46, further comprising the steps of:

examining the condition of a electrical power generation facility; and

making an assessment of the condition of the electrical power generation facility.

57. (previously presented) A computer program contained in a computer readable medium, comprising computer program code means to make a computer or processor carry out for at least one of an electrical power generation facility and an electrical power transmission and distribution network the following steps:

generating an electronic report comprising at least one graphic image of a condition of an inspected portion of at least one of the electrical power generation facility and the electrical power transmission and distribution network;

receiving, at an information system, the electronic report;

presenting, to a user, stored information about the inspected portion;

receiving, at the information system, a recommendation for a maintenance measure of the inspected portion; and

forwarding the recommendation to at least one of an inspector and a parts warehouse.

[End of Examiner's Amendment]

REASONS FOR ALLOWANCE

8. The instant application has been published as PG-PUB US 2002/0087220 A1.

9. Examiner has interpreted the limitations in the independent claims that pertain to a graphic image inserted into an inspection report as being enabled in paragraph [0047] of the PG-PUB, which teaches (emphasis added):

> [0047] If no serious error is found, he then fills in a form so as to report the substation status. Traditionally this form would be a piece of paper, that has to be returned to the Utility, and at return the document would have to be checked in, and any minor anomalies reported to a responsible engineer. According to an aspect of the invention the form is electronic and is automatically registered in Information System, at step 109 of FIG. 3. It is also automatically registered that the inspection has taken place when the document is checked in. **Included in the documentation may be one or more digital photos of the station and components taken by a web camera in the OIK.**

The "OIK" is defined elsewhere in the PG-PUB as follows:

> [0027] An Online Inspection Kit (OIK) 6 provided to the utility by the Service Provider Company as part of a service agreement.
>
> [0028] The OIK 6 preferably includes a web camera and an operator computer terminal, each effectively equipped with a communication link to the Power T & D System Information System 3. At the same time, the Help Desk has access to all information retrieved by the OIK. This is enabled using Web-technology.

10. The following is an examiner's statement of reasons for allowance.

11. The closest relevant prior art used is:

    a. U.S. Patent 5,657,245 to Hecht et al., issued on Aug. 12, 1997. ("**Hecht**").

    b. U.S. Patent 5,321,629 to Shirata et al., issued on Jun. 14, 1994. ("**Shirata**").

c. U.S. Patent 5,311,562 to Palusamy et al., issued on May 10, 1994.

("**Palusamy**").

d. U.S. Patent 5,817,958 to Uchida et al., issued on Oct.6, 1998. ("**Uchida**").

12. Claims 1-18 have been cancelled.

13. In regards to independent Claim 19,

> 19. An information system for an electrical power generation, transmission and distribution system to provide maintenance for the electrical power generation, transmission and distribution system and apparatus connected to said electrical power generation, transmission and distribution system, said information system comprising one or more databases, said information system comprising:
>
> a service Help Desk,
>
> mobile inspection means to make a graphic image for an inspection report,
>
> communication means at the Help Desk to receive an inspection report comprising a graphic image,
>
> display means at the Help desk to examine at least one of the report and the graphic image,
>
> mobile terminal, computer and display means to retrieve information from the one or more databases,
>
> computer and display means to compare at least one of the graphic image and the inspection report with retrieved information, and
>
> ordering and scheduling means to issue purchase orders and work orders in respect of the report in order to provide maintenance service at a later time for the electrical power generation, transmission and distribution system and apparatus connected to said electrical power generation, transmission and distribution system.

None of the cited U.S. patents expressly teach the following limitations:

> mobile inspection means to make a graphic image for an inspection report,

communication means at the Help Desk to receive an inspection report comprising a graphic image,

Hecht teaches a data acquisition means in a nuclear power plant such as an eddy current or ultrasonic testing system or an acoustic, thermal or flow rate monitor (Fig.1, Item 5 and col.2, lines 28-33). Hecht also teaches a monitoring means consisting of a computer terminal with the capability of preparing reports (Fig.1, Item 12 and col.4, lines 36-42). However, Hecht does not expressly teach the claimed "mobile inspection means to make a graphic image for an inspection report" or the "inspection report comprising an image."

Shirata teaches the use of portable collection equipment for collecting field data at power plant facilities (see col.1, lines 5-10; and col.2, lines 12-22). However, Shirata does not expressly teach the claimed "mobile inspection means to make a graphic image for an inspection report" or the "inspection report comprising an image."

Palusamy teaches the use of "valve monitoring screens" that show a valve defect status image for a valve in a plant (see Fig.7, Item 130; and col.11, lines 2-12). However, Palusamy does not expressly teach the claimed limitations of a "mobile inspection means to make a graphic image for an inspection report", nor that the images on the "valve monitoring screens" were generated by a "mobile inspection means", nor that displayed info corresponds to an "inspection report".

Uchida teaches a plant monitoring and diagnosing method. However, Uchida does not expressly teach the claimed "mobile inspection means to make

a graphic image for an inspection report" or the "inspection report comprising an image."

14. Claims 20-23 and 25-28 depend from allowable claim 19, and therefore are also allowable.

15. Claims 24 and 29-31 have been cancelled.

16. In regards to independent claim 32,

> 32. A computer-readable medium having computer-executable instructions to make a computer or a processor operate in Information System comprising one or more databases and a Help Desk to provide maintenance for an electrical power generation, transmission and distribution system and apparatus connected to said electrical power generation, transmission and distribution system, wherein said computer or processor is made to carry out actions to provide maintenance for said electrical power generation, transmission and distribution system including to:
>
> receive a data input with a graphic image of a condition of an inspected portion of the electrical power generation, transmission and distribution system and apparatus connected to said electrical power generation, transmission and distribution system representing at least one maintenance report,
>
> match the data input to an apparatus connected to a network for said electrical power generation, transmission and distribution system with information stored in a database,
>
> receive a second input documenting a maintenance repair action on the inspected portion,
>
> link the second documented repair action to the apparatus and network,
>
> store the documented repair action.

None of the cited U.S. patents expressly teach the following limitations:

> receive a data input with a graphic image of a condition of an inspected portion of the electrical power generation, transmission and distribution

system and apparatus connected to said electrical power generation, transmission and distribution system

match the data input to an apparatus connected to a network for said electrical power generation, transmission and distribution system with information stored in a database,

Hecht teaches a data acquisition means in a nuclear power plant such as an eddy current or ultrasonic testing system or an acoustic, thermal or flow rate monitor (Fig.1, Item 5 and col.2, lines 28-33). Hecht also teaches a monitoring means consisting of a computer terminal with the capability of preparing reports (Fig.1, Item 12 and col.4, lines 36-42). However, Hecht does not expressly teach the claimed "match the data input ... with information stored in a database."

Shirata teaches the use of portable collection equipment for collecting field data at power plant facilities (see col.1, lines 5-10; and col.2, lines 12-22). However, Shirata does not expressly teach the claimed "match the data input ... with information stored in a database."

Palusamy teaches the use of "valve monitoring screens" that show a valve defect status image for a valve in a plant (see Fig.7, Item 130; and col.11, lines 2-12). However, Palusamy does not expressly teach the claimed "match the data input ... with information stored in a database."

Uchida teaches a plant monitoring and diagnosing method. However, Uchida does not expressly teach the claimed "match the data input ... with information stored in a database."

17. Claims 33 and 35-36 depend from allowable claim 32, and therefore are also allowable.

18. Claims 34 and 37-45 have been cancelled.

19. In regards to independent claim 46,

> 46. A method to provide maintenance to at least one of an electrical power generation facility and an electrical power transmission and distribution network, said method comprising the steps of:
>
> generating an electronic report comprising at least one graphic image of a condition of an inspected portion of at least one of the electrical power generation facility and the electrical power transmission and distribution network;
>
> receiving, at an information system, the electronic report;
>
> presenting, to a user, stored information about the inspected portion;
>
> generating a recommendation for a maintenance measure of the inspected portion;
>
> receiving, at the information system, the recommendation for a maintenance measure of the inspected portion; and
>
> forwarding the recommendation to at least one of an inspector and a parts warehouse.

Hecht teaches a data acquisition means in a nuclear power plant such as an eddy current or ultrasonic testing system or an acoustic, thermal or flow rate monitor (Fig.1, Item 5 and col.2, lines 28-33). Hecht also teaches a monitoring means consisting of a computer terminal with the capability of preparing reports (Fig.1, Item 12 and col.4, lines 36-42). However, Hecht does not expressly teach the claimed "generating an electronic report comprising at least one graphic image of a condition of an inspected portion of ... a power generation facility."

Shirata teaches the use of portable collection equipment for collecting field data at power plant facilities (see col.1, lines 5-10; and col.2, lines 12-22).

However, Shirata does not expressly teach the claimed "generating an electronic report comprising at least one graphic image of a condition of an inspected portion of ... a power generation facility."

Palusamy teaches the use of "valve monitoring screens" that show a valve defect status image for a valve in a plant (see Fig.7, Item 130; and col.11, lines 2-12). However, Palusamy does not expressly teach the claimed limitations of a "generating an electronic report comprising at least one graphic image of a condition of an inspected portion of ... a power generation facility."

Uchida teaches a plant monitoring and diagnosing method. However, Uchida does not expressly teach the claimed "generating an electronic report comprising at least one graphic image of a condition of an inspected portion of ... a power generation facility."

20. Claims 47-56 depend from allowable claim 46, and therefore are also allowable.

21. In regards to independent claim 57,

> 57. A computer program contained in a computer readable medium, comprising computer program code means to make a computer or processor carry out for at least one of an electrical power generation facility and an electrical power transmission and distribution network the following steps:
>
> generating an electronic report comprising at least one graphic image of a condition of an inspected portion of at least one of the electrical power generation facility and the electrical power transmission and distribution network;
>
> receiving, at an information system, the electronic report;
>
> presenting, to a user, stored information about the inspected portion;

receiving, at the information system, a recommendation for a maintenance measure of the inspected portion; and

forwarding the recommendation to at least one of an inspector and a parts warehouse.

Hecht teaches a data acquisition means in a nuclear power plant such as an eddy current or ultrasonic testing system or an acoustic, thermal or flow rate monitor (Fig.1, Item 5 and col.2, lines 28-33). Hecht also teaches a monitoring means consisting of a computer terminal with the capability of preparing reports (Fig.1, Item 12 and col.4, lines 36-42). However, Hecht does not expressly teach the claimed "generating an electronic report comprising at least one graphic image of a condition of an inspected portion of ... a power generation facility."

Shirata teaches the use of portable collection equipment for collecting field data at power plant facilities (see col.1, lines 5-10; and col.2, lines 12-22). However, Shirata does not expressly teach the claimed "generating an electronic report comprising at least one graphic image of a condition of an inspected portion of ... a power generation facility."

Palusamy teaches the use of "valve monitoring screens" that show a valve defect status image for a valve in a plant (see Fig.7, Item 130; and col.11, lines 2-12). However, Palusamy does not expressly teach the claimed limitations of a "generating an electronic report comprising at least one graphic image of a condition of an inspected portion of ... a power generation facility."

Uchida teaches a plant monitoring and diagnosing method. However, Uchida does not expressly teach the claimed "generating an electronic report

comprising at least one graphic image of a condition of an inspected portion of ... a power generation facility."

22. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

23. The following prior art, made of record and not relied upon, is considered pertinent to applicant's disclosure.

24. Prof. Dr. F.A. Sturm et al. "The Paperless Power Plant." 2003. http://www.newenergyassoc.com/documents/The_Paperless_Power_Plant.pdf.

25. This article post-dates the filing date of the instant application, and therefore does not qualify as prior art. This reference teaches the generation of maintenance documentation in electrical power plants (see pp.7-10). It also teaches (See Fig.2 on p.3) that maintenance information can include text, images, and signals. The reference does not, however, expressly teach the embedding of images into the maintenance reports, as claimed in the instant application.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ayal I. Sharon whose telephone number is (571) 272-3714. The examiner can normally be reached on Monday through Thursday, and the first Friday of a bi-week, 8:30 am – 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached at (571) 272-3749.

Any response to this office action should be faxed to (571) 273-8300, or mailed to:

USPTO
P.O. Box 1450
Alexandria, VA 22313-1450

or hand carried to:

USPTO
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2100 Receptionist, whose telephone number is (571) 272-2100.

Ayal I. Sharon
Art Unit 2123
January 9, 2006